

Study for the Automation of the Central Department for International Trade Policies (Trade Remedies)

**Prepared for
The Government of Egypt
Ministry of Trade and Supply**



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PREFACE

This report is based on a study conducted by the Development Economic Policy Reform Analysis (DEPRA) Project, under contract to the United States Agency for International Development, Cairo, Egypt (USAID/Egypt) (Contract No. 263-C-00-96-00001-00).

The DEPRA project is intended to encourage and support macroeconomic reform in Egypt through the provision of technical assistance and services to the Ministry of Trade and Supply with particular focus on international trade and investment liberalization, deregulation and financial sector strengthening.

The study was compiled and authored by Michelle Morgan, Team Leader, from Nathan Associates Inc. Mr. Sherif Elantil, under contract with Allied Corporation of Egypt, provided substantial technical and programming assistance.

The team would like to thank the DEPRA coordinator, Dr. Rollo Ehrich, and the staff at the Ministry of Trade and Supply, Foreign Trade Sector, for their support.

The author is solely responsible for all opinions expressed in this report, and the conclusions and recommendations do not necessarily reflect opinions or policies of either the Government of Egypt or the U.S. Agency for International Development.

Executive Summary

The DEPRA project undertook a study to improve the quality and systematic use of trade related data in the Ministry of Trade and Supply. A trade economist and information systems expert and a database programmer provided on the job technical assistance to the MIS staff of the Foreign Trade Sector to design a number of systems to improve the productivity of the Central Department for International Trade Policies.

This included:

- 1) Professional guidance on network and internal communications and development of network-based file management software.
- 2) Development of an automated (scanned entry) system for entering import data received bank forms.
- 3) Introduction of software to aid in translation of documents.
- 4) Development of a database for retaining and analyzing data received from Egyptian Customs.

Nathan Associates fielded a team composed of one expatriate expert and one local Egyptian expert to work with the MIS staff in carrying out the planning and design of the systems. The local Egyptian expert will continue to work with the MIS staff on a regular basis to help them complete the implementation of computerized systems and to develop simple applications that yield data and information for trade analysis purposes.

Conclusions and Recommendations

The functional capability of the ITP department of FTS has been increased several times over with the installation of a LAN and the implementation of a filing system. We recommend that ITP management designate a full time staff member to be responsible for administering the filing system, registering and checking out documents, and that management enforce use of the filing system by ensuring that all employees understand the logic, benefits, and usage of the system.

The use of the semi-automated translation system will greatly speed translation from English to Arabic. The translation program itself must be trained to recognized specialized words and phrases in order to produce more accurate, faster translations, as the terminology used by ITP in its day to day work is highly specialized. ITP should begin to systematically train the Arabic to English software by processing translations and entering new words and phrases into the software's customized dictionaries. We recommend that ITP management and computer staff encourage translation personnel to systematically train the software as they translate documents so that over time, the percentage accuracy of the software aided translations becomes close to 96%. We recommend that the director of ITP designate one person from the translation unit to oversee this process.

The automated bank forms and customs database, once fully employed by ITP, will enhance the speed of data gathering, processing, and researching within the department. We recommend that ITP management assign one person from the ITP computer staff the responsibility to work with the DEPRA team to complete deployment of each database and to continue the oversight for maintenance and updating of these after the technical assistance is completed.

The four core computer staff members of the ITP department of FTS gained considerable technical competence in application design for computerized tasks during this assignment as a result of daily on-the-job training and access to modern equipment and software. These individuals also gained confidence in developing their own applications and in finding solutions to office and document automation problems. In order to retain these personnel, we recommend that a salary adjustment be made to raise the salary levels of core ITP computer staff to salary levels that these individuals could obtain in the private sector. Illustrative private sector salaries for similarly skilled professionals is in the range of LE 2,900 per month for junior staff and LE 5,876 for senior staff. It is important that the management of ITP and the Ministry of Trade and Supply recognize the importance of retaining highly qualified MIS/computer personnel, given the investment in training that has been given to these staff members, both on the job training received during this technical assistance effort and that training requested under the DT2 project. ITP requires permission from the Ministry of Trade and Supply to increase salaries for these individuals. We strongly support ITP's request for such permission and recommend that a salary review be conducted for ITP employees in information systems and data processing functions.

We recommend that an observational tour combined with participant training be designed and implemented for selected computer staff of the ITP department, to include attendance at FOSE 99 in March of 1999, in Washington DC. FOSE is the largest exposition of computer equipment, software and technologies accessible to the public, and offers workshops over the 4 day schedule of events to introduce computer professionals to the techniques of employing business and communication products effectively. Other components of the participant training should include visits to the US Department of Commerce and USTR to observe information management practices for trade organizations, database design and maintenance for trade analysis, and computerization of the calculations required for anti-dumping and subsidy cases. The participants would benefit in particular from sessions with Department of Commerce webmasters to learn about the design and integration of the website with Commerce trade statistics databases and other online information. The core training events should include a two week seminar on trade and economics analysis applications for computers, specific to trade remedies, and a one week seminar on the principles of graphic design and content for international trade organization publications and newsletters.

Finally, we note that the functioning of the ITP department is far from optimal staff productivity, management and personnel policies. If ITP is to function efficiently and effectively from a performance standpoint in carrying out the workload of expected cases in the area of trade remedies, a number of issues must be addressed internally. Staff organization exists only at a titular level, and functions, responsibilities, and authority are neither delegated or clearly

established for professionals and support personnel. Further technical assistance and computerization will have little impact on the unit's productivity unless the unit's management practices, both from the viewpoint of staff deployment and the prioritization of the unit's activities, are improved. ITP's staff has received extensive training through a number of multilateral and bilateral donor programs, but hands on practice and usage of training-acquired skills is low due to limited, organized involvement of the staff in the ITP's activities on many levels. ITP must be encouraged to view technical assistance and training as a step towards upgrading staff skills and responsibilities in order to promote existing staff to more challenging duties and fulfilling the organizational mission of the unit.

The final recommendation of this report is for ITP to develop and implement, within the framework of the Foreign Trade Sector:

- 1) a clear mission statement,
- 2) a plan for human resource management, and
- 3) a logical procedure for the assignment of staff duties as related to the conduct of trade remedies cases and other supporting functions.

1.0 Background

The Development Economic Policy Reform Analysis (DEPRA) Project is a USAID/Egypt-funded program to provide technical assistance to the Government of Egypt (GOE) to encourage and support economic reform, with special concern for international trade/investment liberalization, deregulation of the economy, and financial sector strengthening. The Project provides technical assistance and services, training, and infrastructure support to the Ministry of Economy and the Ministry of Trade and Supply (MOTS).

The activities of that part of the Project working at the MOTS (DEPRA/MOTS) focus on international trade liberalization, trade policy analysis and decision support, economic integration, export promotion, and the administration of trade remedies. DEPRA/MOTS provides assistance to six sectors or agencies of the MOTS including (1) the Foreign Trade Sector, (2) Foreign Commercial Representation, (3) Export Promotion Centre, (4) Trade Points (information technology for commercial pursuits), (5) International Trade Fairs/Exhibitions, and (6) the General Organization for Export and Import Control (administration of standards/quality controls and consumer fraud protection).

With the agreement of the Minister, DEPRA/MOTS infrastructure support activities (provision of computer hardware/software, networks) was concentrated on the Foreign Trade Sector and, in particular, its Office of International Trade Policies, as well as the Trade Policy Analysis/Decision Support and Coordination Unit in the Technical Office of the Minister. The Foreign Trade Sector's responsibilities include the aggregation and analysis of trade data and statistics, trade policy analysis, support for international commercial negotiations, and administration of Egyptian trade remedies. The Office of International Trade Policies has been delegated responsibility for the administration of Egypt's Antidumping, Subsidies/ Countervailing Duties, and Safeguards remedies in conformity with the GATT '94/WTO provisions and international agreements for the same, and Egyptian laws implementing them.

In August of 1997, a DEPRA team undertook and completed a computer needs assessment of most of the sectors of the MOTS, but with special concentration on the computer hardware and software, support infrastructure, and training needs of the FTS/Office of International Trade Policies. The computer equipment was procured by DEPRA and delivered to the Foreign Trade Sector in March of 1998.

The August "Needs Assessment" also identified, in addition to commodities, needs for training and technical assistance related to effective use of computers. This included:

- 1) Professional guidance on issues related to final design for network and internal communications, equipment installation, network start-up and commissioning, and installation and introductory training on network-based file management software.
- 2) Development of an automated (scanned entry) system for entering import data received on written forms submitted by Egyptian banks for all foreign exchange requests from importers

- 3) Installation of and introductory training in software to aid in translation of documents from English to Arabic and Arabic to English.
- 4) Development of a database for retaining and analyzing data received from Egyptian Customs.

Nathan Associates fielded a team composed of one expatriate expert and one local Egyptian expert to address these needs.

2.0 Technical Assistance by Component

2.1 Component 1. Network Design and Internal Communications:

The team assisted TR in determining the most effective set-up of their computer network and integrating DEPRA procured computers, scanners, and various software packages into the system. The DEPRA procured hardware and software were installed and the local area network was prepared for the ITP's move to a new building adjacent to old office. The entire LAN infrastructure including cabling and wall jacks, patch panels, and hubs are ready to receive computers as soon as the unit moves offices. One hub was found to have a defective auto-sensing device and was returned to the manufacturer for repair. A network specialist (CompuServ) has been identified and retained to assist FTS with final configuration as soon as the move to the new offices is completed.

The team programmed, installed and trained FTS employees in the use of an Arabic capable file storage and retrieval system for both paper and electronic documents and files.

The team also developed a plan for a logical filing system for paper documents, particularly for confidential documents under protective order. A set of guidelines for TR's reference is being produced in Arabic in collaboration with FTS staff at this time.

2.2 Component 2. Automation of Bank Form Data Entry:

The DEPRA team worked with MOTS staff in planning and organizing an automated system for processing bank forms to obtain import data currently entered manually by Department for Export and Import. With FTS computer staff, the team members installed scanners and optical mark recognition software, designed and tested scannable forms to replace bank forms currently in use, and trained the *Principia* form-recognition software to accurately process scanned forms. FTS computer staff were guided in the development and set-up of an appropriate database for storage of import data obtained from bank forms, and a database design was developed with an Arabic language interface. FTS computer staff will continue with the testing and implementation of a procedure that automatically appends scanned records to a database for predicted imports. MOTS staff was provided with on-the-job training of the scanning system and a reference sheet with step by step instructions. FTS computer staff will work with end-users to design and program customized reports and simplified queries with assistance from the DEPRA team. Final implementation of the system awaits the cooperation of the Central Bank in supplying FTS with bank codes and importer registration numbers. We expect this to proceed before year's end.

2.3 Component 3. Automation of Translation Services:

The DEPRA team worked with MOTS translators to develop and implement a partially automated computer assisted system for translation of critical documents related to antidumping cases and other important information documents. The team set up a scanner, character recognition software, and translation software to allow translators to scan and process draft translations of large volumes of documents from English to Arabic and from Arabic to English. The team also FTS staff to become proficient in customizing the software and training the translation modules of the software to recognize words and phrases commonly employed in anti-dumping cases. Finally, the team provided on-the-job training to several translators in use of the system and left behind two reference manuals, one for Arabic to English and one for English to Arabic.

2.4 Component 4. Development of Customs Database:

The DEPRA team worked with FTS and Central Customs staff to determine an efficient structure for storing disaggregated customs data obtained from Central Customs. One of the DEPRA team members continues to work with customs and FTS in setting up and testing the final database, and in developing and programming a routine for automatic update of the database by appending new records. The DEPRA team will supervise and advise FTS staff as they load currently available customs data and any back-data still obtainable on diskettes into database. DEPRA team members have provided on the job training to FTS staff in designing and preparing Access databases, and will assist FTS staff in developing reports and simplified queries for imports by HS code and other keys. Finally, the DEPRA team will conduct hands on learning and on-the-job training for operating and maintaining new systems and produce a reference sheet with step by step instructions when the database is fully operational. This depends on the establishment of a leased line (telecom) connection with customs, which we expect to be operational by years end. The leased line connection from FTS to the ARENTO central switchboard was found to have too weak a signal for the reliable transmission of electronic data and efforts are under way to boost power by re-routing the connection or adding repeaters. Once both the bank form scanning and customs database are fully implemented, the DEPRA team members will assist FTS computer staff to develop a program that cross checks imports as reported by banks and as reported by customs by comparing import data in bank forms database with import data in customs database. This procedure will show the correlation between the two time series and indicate where deviations occur.

3.0 Deliverables

- 1) Completed: Final design of computer network implemented by network engineer.
- 2) Completed: File sharing arrangements that restrict access to confidential files used in antidumping cases implemented.
- 3) Completed: Arabic file tracking system in place and operational.
- 4) Completed: Filing system guidelines produced for paper documents.
- 5) Completed: Scanable bank forms designed and tested.

- 6) Completed: Automated translation system implemented and translation staff trained, instruction manual produced.
- 7) Completed: Bank form processing system designed and staff introduced to system.
Underway: automated system inaugurated, Arabic instruction manual produced.
- 8) Completed: Customs database designed.
Underway: Customs database fully operational, instruction manual for updates and mirroring produced in Arabic.
- 9) Completed: Status report presented to DEpra study coordinator.

4.0 Conclusions and Recommendations

The functional capability of the ITP department of FTS has been increased several times over with the installation of a LAN and the implementation of the filing system. The procurement of shelving and the adoption of DEpra's procedures for filing and the use of the electronic filing system will also ensure that ITP is in compliance with GATT/WTO rules regarding the confidentiality of information used in the investigation of anti-dumping claims. **We recommend that ITP management designate a full time staff member to be responsible for administrating the filing system, registering and checking out documents, and that management enforce use of the filing system by ensuring that all employees understand the logic, benefits, and usage of the system.**

The use of the semi-automated translation system will greatly speed translation from English to Arabic in the sector immediately, and increasingly so after ITP moves to new offices and the translators are connected to the LAN. Significant gains in translation speed for Arabic to English are limited by two factors: the limitations of optical character recognition software for scanning Arabic language documents and the fact that Arabic to English translation modules must be "trained" to recognize and translate words and phrases unique to trade economics and the administration of trade remedies. The scanning limitation does not apply, of course, to source documents already typed in Arabic and available in electronic files. It is expected that the accuracy of Arabic character recognition software will improve drastically over the next year or two, as many software developers are currently working on improving the technology for a number of Arabized fonts currently used, and it is also expected that the number of documents submitted in electronic format will increase in proportion to those submitted on paper as computerization catches on in Egypt. The training of the Arabic to English translation modules is more problematic. At this time, translators have access to only two computers. Once ITP moves to their new office and six machines are made available to translators, ITP should begin to systematically train the Arabic to English software by processing translations and entering new words and phrases into the software's customized dictionaries. **We recommend that ITP management and computer staff encourage translation personnel to systematically train the software as they translate documents so that over time, the percentage accuracy of the software aided translations becomes close to that of the English to Arabic module. This investment would take about four to six months of conscientious application by one of the ITP translators.**

We recommend that the director of ITP designate one person from the translation unit to oversee this process.

The automated bank forms and customs database, once fully employed by ITP, will enhance the speed of data gathering, processing, and researching within the department. **We recommend that ITP management assign one person from the ITP computer staff the responsibility to work with the DEPRA team to complete deployment of each database and to continue the oversight for maintenance and updating of these after the technical assistance is completed.**

The four core computer staff members of the ITP department of FTS gained considerable technical competence in application design for computerized tasks during this assignment as a result of daily on-the-job training and access to modern equipment and software. These individuals also gained confidence in developing their own applications and in finding solutions to office and document automation problems. **In order to retain these personnel, we recommend that a salary adjustment be made to raise the salary levels of core ITP computer staff to salary levels that these individuals could obtain in the private sector.** Illustrative private sector salaries for similarly skilled professionals is in the range of LE 2,900 per month for junior staff and LE 5,876 for senior staff. It is important that the management of ITP and the Ministry of Trade and Supply recognize the importance of retaining highly qualified MIS/computer personnel, given the investment in training that has been given to these staff members, both on the job training received during this technical assistance effort and that training requested under the DT2 project. We are of the opinion that the existing personnel cannot be easily replaced by staff of the same caliber who are familiar with the operations, requirements, and existing information systems of the department. ITP requires permission from the Ministry of Trade and Supply to increase salaries for these individuals. **We strongly support ITP's request for such permission and recommend that a salary review be conducted for ITP employees in information systems and data processing functions.**

We recommend that an observational tour combined with participant training be designed and implemented for selected computer staff of the ITP department, to include attendance at FOSE 99 in March of 1999, in Washington DC. FOSE is the largest exposition of computer equipment, software and technologies accessible to the public, and offers workshops over the 4 day schedule of events to introduce computer professionals to the techniques of employing business and communication products effectively. Other components of the participant training should include visits to the US Department of Commerce and USTR to observe information management practices for trade organizations, database design and maintenance for trade analysis, and computerization of the calculations required for anti-dumping and subsidy cases. The participants would benefit in particular from sessions with Department of Commerce webmasters to learn about the design and integration of the website with Commerce trade statistics databases and other online information. The core training events should include a two week seminar on trade and economics analysis applications for computers, specific to trade remedies, and a one week seminar on the principles of graphic design and content for international trade organization publications and newsletters. We find in particular that Foreign Trade Sector's and ITP's plans for launching websites accessible to the public are vaguely formed and that the look and content of the prototype sites under construction do not appropriately represent the Government of Egypt.

Finally, we note that the functioning of the ITP department is far from optimal regarding staff productivity, management and personnel policies. If ITP is to function efficiently and effectively from a performance standpoint in carrying out the workload of expected cases in the area of trade remedies, a number of issues must be addressed internally. Staff organization exists only at a titular level, and functions, responsibilities, and authority are neither delegated or clearly established for professionals and support personnel. Further technical assistance and computerization will have little impact on the unit's productivity unless the unit's management practices, both from the viewpoint of staff deployment and the prioritization of the unit's activities, are improved. ITP's staff has received extensive training through a number of multilateral and bilateral donor programs, but hands on practice and usage of training-acquired skills is low due to limited, organized involvement of the staff in the ITP's activities on many levels. ITP must be encouraged to view technical assistance and training as a step towards upgrading staff skills and responsibilities in order to promote existing staff to more challenging duties and fulfilling the organizational mission of the unit. The tendency at present is to accumulate training for personnel based on the availability of training rather than on specific job skills that will be used in the workplace, and to view technical assistance as a substitute for the productive use of existing staff. ITP staff are in general motivated and sufficiently trained to take on more responsibility. **The final recommendation of this report is for ITP to develop and implement, within the framework of the Foreign Trade Sector:**

- 1) a clear mission statement,**
- 2) a plan for human resource management, and**
- 3) a logical procedure for the assignment of staff duties as related to the conduct of trade remedies cases and other supporting functions.**